

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses.

1-11. (Canceled)

12. (Previously Presented) A packet switch apparatus with oversubscribed port handling capability for use in a switching mesh, the apparatus including:

a plurality of ports; and

a switch controller coupled to the plurality of ports,

wherein the switch controller is configured to (a) detect an oversubscribed port, (b) select a set of paths exiting at the oversubscribed port for retagging, (c) invalidate tags for the set of paths, (d) receive packets with the invalidated tags, and (e) retag the received packets with a tag associated with a detour path;

wherein the invalidated tags and the tags associated with the detour comprise paths assigned to respective ones of the packets and which paths individually comprise a path between an originating source switch and an end destination switch of the respective packet and which includes a plurality of different switches intermediate the originating source and end destination switches; and

wherein the invalidated tags and the tags associated with the detour individually comprise a source switch identifier which identifies the originating source switch of the respective packet of the individual tag and a destination switch identifier which identifies the end destination switch of the respective packet of the individual tag.

13. (Previously Presented) The apparatus of claim 12 wherein the switch controller is further configured to determine the detour path from the detecting switch to the end destination switch for the set of paths.

14. (Original) The apparatus of claim 12 wherein the switch controller is further configured to inform an owner switch of the set of paths that the paths are to be retagged by the detecting switch.

15-22. (Canceled)

23. (Previously Presented) The apparatus of claim 12, wherein the detour path defines an order of the switches of the detour path to communicate the packets after the retagging and which is different than orders of the switches of respective ones of the selected set of paths to communicate the packets.

24-25. (Canceled)

26. (Previously Presented) The apparatus of claim 12, wherein the tags associated with the detour remain associated with the received packets after the retagging and during subsequent communications of the received packets to the end destination switch by the plural switches of the detour path.

27. (Previously Presented) The apparatus of claim 12, wherein tags of other packets, received by the packet switch apparatus during the retagging of the received packets with the tag associated with the detour path, are not retagged by the switch controller.

28. (New) A method of handling oversubscribed ports between switches, the method comprising:

detecting an oversubscribed port at a detecting switch;
selecting a set of paths exiting at the oversubscribed port for retagging;
invalidating tags for the set of paths;
receiving packets with the invalidated tags; and
retagging the received packets with a tag associated with a detour path;

wherein the invalidated tags and the tags associated with the detour comprise paths assigned to respective ones of the packets and which paths individually comprise a path between an originating source switch and an end destination switch of the respective packet and which includes a plurality of different switches intermediate the originating source and end destination switches, and

wherein the invalidated tags and the tags associated with the detour individually comprise a source switch identifier which identifies the originating source switch of the respective packet of the individual tag and a destination switch identifier which identifies the end destination switch of the respective packet of the individual tag.

29. (New) The method of claim 28 further comprising determining the detour path from the detecting switch to a destination switch for the set of paths.

30. (New) The method of claim 28, further comprising informing an owner switch of the set of paths that the paths are to be retagged by the detecting switch.

31. (New) The method of claim 30, wherein more than one owner switch is so informed.

32. (New) The method of claim 30, further comprising the owner switch moving at least some MAC addresses associated with the set of paths.

33. (New) The method of claim 32, wherein the owner switch moves all MAC addresses associated with the set of paths.

34. (New) The method of claim 28, wherein the detecting switch is different from an owner switch of the set of paths.

35. (New) The method of claim 28, wherein the detecting switch comprises a same switch as an owner switch of the set of paths.

36. (New) The method of claim 28, wherein the set of paths includes at least one path.

37. (New) The method of claim 28, wherein the switches are part of a switching mesh.

38. (New) A switching mesh including a capability to handle oversubscribed ports between switches, wherein a plurality of switches in the mesh are individually configured to detect an oversubscribed port,
select a set of paths exiting at the oversubscribed port for retagging,
invalidate tags for the set of paths,
receive packets with the invalidated tags, and
retag the received packets with a tag associated with a detour path,
wherein the invalidated tags and the tags associated with the detour comprise paths assigned to respective ones of the packets and which paths individually comprise a path between an originating source switch and an end destination switch of the respective packet and which includes a plurality of different switches intermediate the originating source and end destination switches, and
wherein the invalidated tags and the tags associated with the detour individually comprise a source switch identifier which identifies the originating source switch of the respective packet of the individual tag and a destination switch identifier which identifies the end destination switch of the respective packet of the individual tag.

39. (New) The switching mesh of claim 38, wherein a switch detecting an oversubscribed port is configured to determine a number of path tags associated with the oversubscribed port and to operate in at least two modes depending on the number of associated path tags.

40. (New) The switching mesh of claim 39, wherein if the number of associated path tags is larger than a threshold, then a first mode is used where some of the associated path tags are retagged by the detecting switch to a detour path tag, and the owner switch of those retagged paths are informed that those paths are no longer being used.

41. (New) The switching mesh of claim 40, wherein if the number of associated path tags is smaller than a threshold, then a second mode is used without retagging by the detecting switch.

42. (New) The switching mesh of claim 41, wherein in the second mode, a set of at least one path tag is chosen, and the owner switch of the chosen tags is informed of the oversubscribed port.

43. (New) The switching mesh of claim 42, wherein an informed owner switch reassigns at least one MAC address associated with the chosen tag to another, less costly path tag.